

1 STATE OF NEW MEXICO  
2 ENERGY AND MINERALS DEPARTMENT  
3 OIL CONSERVATION DIVISION  
4 STATE LAND OFFICE BLDG.  
5 Santa Fe, New Mexico

6 6 May, 1987

7 EXAMINER HEARING

8 IN THE MATTER OF:

9 Application of Yates Petroleum Corp- CASE  
10 oration for a unit agreement, Chaves 9125  
11 County, New Mexico.

12 BEFORE: David R. Catanach, Examiner

13 TRANSCRIPT OF HEARING

14 A P P E A R A N C E S

15 For the Division: Jeff Taylor  
16 Legal Counsel to the Division  
17 Oil Conservation Division  
18 State Land Office Bldg.  
19 Santa Fe, New Mexico

20 For the Applicant:  
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MR. CATANACH: Call next Case

No. 9125

MR. TAYLOR: The application of  
Yates Petroleum Corporation for a unit agreement, Chaves  
County, New Mexico.

MR. CATANACH: At the request of  
the applicant Case No. 9125 will be continued to the  
Examiner Hearing May 20, 1987.

(Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO  
HEREBY CERTIFY the foregoing Transcript of Hearing before  
the Oil Conservation Division (Commission) was reported by  
me; that the said transcript is a full, true, and correct  
record of the hearing, prepared by me to the best of my  
ability.

Sally W. Boyd CSR

I do hereby certify that the foregoing is  
a complete record of the proceedings in  
the Examiner hearing of Case No. 9125,  
heard by me on May 6 1987.  
David R. Catonach, Examiner  
Oil Conservation Division

STATE OF NEW MEXICO  
ENERGY AND MINERALS DEPARTMENT  
OIL CONSERVATION DIVISION  
STATE LAND OFFICE BLDG.  
SANTA FE, NEW MEXICO

20 May 1987

EXAMINER HEARING

IN THE MATTER OF:

Application of Yates Petroleum Cor-      CASE  
poration for approval of a unit      9125  
agreement, Chaves County, New Mexico.

BEFORE: Michael E. Stogner, Examiner

TRANSCRIPT OF HEARING

A P P E A R A N C E S

For the Division:

Jeff Taylor  
Attorney at Law  
Legal Counsel to the Division  
State Land Office Bldg.  
Santa Fe, New Mexico 87501

For the Applicant:

Chad Dickerson  
Attorney at Law  
DICKERSON, FISK & VANDIVER  
Seventh & Mahone/Suite E  
Artesia, New Mexico 88210

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## I N D E X

## KEN BEARDEMPHIL

Direct Examination by Mr. Dickerson 4

Cross Examination by Mr. Stogner 5

## MARK MAURITSEN

Direct Examination by Mr. Dickerson 12

Cross Examination by Mr. Stogner 18

## E X H I B I T S

Yates Exhibit One, Plat 4

Yates Exhibit Two, Unit Agreement 5

Yates Exhibit Three, Operating Agreement 7

Yates Exhibit Four, Letter 8

Yates Exhibit Five, Maps 13

Yates Exhibit Six, Cross Section 15

1 MR. STOGNER: We'll call next  
2 Case Number 9125.

3 MR. TAYLOR: The application of  
4 Yates Petroleum Corporation for a unit agreement, Chaves  
5 County, New Mexico.

6 MR. DICKERSON: Mr. Examiner,  
7 I'm Chad Dickerson of Artesia, New Mexico, on behalf of the  
8 applicant.

9 I have two witnesses, one of  
10 whom is Mr. Mauritsen, who was sworn in the previous case.

11 MR. STOGNER: Let the record so  
12 show that Mr. Mauritsen was sworn in Case Number 9135.

13

14 (Witness sworn.)

15

16 KEN BEARDEMPHIL,  
17 being called as a witness and being duly sworn upon his  
18 oath, testified as follows, to--wit:

19

20 DIRECT EXAMINATION

21 BY MR. DICKERSON:

22 Q Mr. Beardemphil, what is your name, your  
23 occupation, and where do you reside?

24 A Ken Beardemphil, landman with Yates  
25 Petroleum. I reside in Artesia, New Mexico.

1 Q And, Mr. Beardemphio, have you testified  
2 recently before this Division as a petroleum landman?

3 A Yes, sir, I have.

4 Q And are you familiar with the proposed  
5 Eden Valley Unit involved in this Case 9125?

6 A Yes, sir, I am.

7 MR. DICKERSON: We tender Mr.  
8 Beardemphil as a petroleum landman, Mr. Examiner.

9 MR. STOGNER: Mr. Beardemphil  
10 is so qualified.

11 Q Mr. Beardemphil, will you refer to what  
12 we have submitted as Yates Exhibit Number One and orient the  
13 Examiner with regard to the location of this proposed unit?

14 A Yes, sir, this unit is Chaves County. It  
15 is in Townships 6, 7, and 8 South, Range 24 East. It com-  
16 prises approximately 13,029.66 acres more or less, State,  
17 Federal, and fee lands.

18 Q Now as originally proposed, this unit  
19 consisted of substantially greater amount of acreage, did it  
20 not?

21 A Yes, sir, it did.

22 Q And what is the reason for the contrac-  
23 tion of the unit boundaries?

24 A The Commissioner of Public Lands sent a  
25 letter asking us that they -- regret to inform you that the

1 proposed Eden Valley boundaries cannot be approved. It is  
2 our recommendation that the producing leases be excluded from  
3 the unit area. Unit boundaries should be redrawn and the  
4 exhibit should be revised and corrected accordingly.

5 Q So the contraction of the unit was done  
6 at the request of the Commissioner of Public Lands to elimi-  
7 nate acreage which was either held by production or which  
8 was unleased State acreage.

9 A Yes, sir.

10 Q Exhibit Number One also shows the expira-  
11 tion dates of each of the leases, certain information con-  
12 cerning the ownership of the leases, and ties by reference  
13 to the circled tract numbers back to the exhibits on your  
14 later exhibits?

15 A Yes, sir, uh-huh.

16 Q Direct the Examiner, Mr. Beardemphil, to  
17 Exhibit Number Two and tell him what that instrument is.

18 A Unit agreement for the development and  
19 operation of the Eden Valley Unit.

20 Q And this is the standard, approved form  
21 for State, Federal, and fee lands?

22 A That is correct.

23 Q What is the formation to be tested in  
24 this unit and its anticipated, approximate depth?

25 A The formation is the Abo formation, ap-

1 proximately 3,700 feet.

2 Q And when do you anticipate beginning  
3 operations on the initial test well?

4 A On or before July 1st, 1987.

5 Q And is that July 1st date the expiration  
6 date of the earliest leases committed to this unit?

7 A That is correct, sir.

8 Q Okay, direct the Examiner's attention to  
9 Exhibit B of Exhibit Number Two and very briefly summarize  
10 the information, the type of information which is shown on  
11 that exhibit.

12 A Exhibit B includes all the Federal lands,  
13 State lands, and fee lands, their serial numbers, number of  
14 acres, and the ownership.

15 Q Including all burdens of royalties and  
16 overrides on each tract.

17 A Yes, sir, and working interest percent-  
18 ages.

19 Q Approximately what percentage of the  
20 lands within the unit boundaries have been committed to the  
21 unit at this time, Mr. Beardemphil?

22 A 97.851026.

23 Q And the status of the remaining 3 percent  
24 is unleased lands?

25 A No, they're just not interested in join-

1 ing. They haven't --

2 Q Owned by parties who are not participat-  
3 ing.

4 A Parties who (unclear).

5 Q There is a provision in the unit agree-  
6 ment for subsequent joinder of those parties in the event  
7 they change their mind and desire to participate in the unit  
8 operations?

9 A That's true.

10 Q Okay. Turn to Exhibit Number Three and  
11 briefly summarize for the Examiner that document.

12 A The model form operating agreement for  
13 the Eden Valley Unit, dated April 15th, 1987, for the opera-  
14 tion of the unit.

15 Q Okay, and Exhibit A to Exhibit Number  
16 Three sets forth the ownership of the committed acreage  
17 within the unit boundaries?

18 A Yes, sir, that's correct.

19 Q And that's an equal one/four shares by  
20 four of the Yates corporations?

21 A Yes, sir.

22 Q There are no third parties who have com-  
23 mitted their interest to this Eden Valley Unit?

24 A No, sir.

25 Q Okay. Describe what Exhibit Number Four

1 is for the Examiner.

2           A           It is the letter from the State of New  
3 Mexico Commissioner of Public Lands, and it is where they  
4 informed us of the boundaries and had us revise the -- and  
5 re-draw the exhibits.

6                       MR. DICKERSON: And, Mr. Exam-  
7 iner, since that time, on Monday or yesterday of this week,  
8 the Commissioner of Public Lands has now given preliminary  
9 approval. We did not have time to get that notice but I  
10 will send it to you in the mail immediately upon our return.

11                      MR. STOGNER: Thank you, Mr.  
12 Dickerson.

13           Q           What's the status of any required appro-  
14 val by the Bureau of Land Management insofar as the Federal  
15 lands are concerned?

16           A           They said that since there's less than 10  
17 percent Federal lands that they would go along with whatever  
18 the State commission, you know, after they've looked at it.

19           Q           So the proceedings, assuming we get ap-  
20 proval by this -- by this Commission of Public Lands and  
21 this Division, proof of that will be submitted to the Bureau  
22 of Land Management?

23           A           Yes, sir.

24           Q           Were Exhibits One through Four compiled  
25 by you or under your direction and supervision, Mr. Beardem-

1 phil?

2 A Yes, sir.

3 MR. DICKERSON: Move admission  
4 of those exhibits, Mr. Examiner, and I have no further ques-  
5 tions of this witness.

6 MR. STOGNER: Exhibits One  
7 through Four will be admitted into evidence.

8

9 CROSS EXAMINATION

10 BY MR. STOGNER:

11 Q Mr. Beardemphil, just want to make sure,  
12 the lands described on your Exhibits Numbers One, Two, and  
13 Three, or let's go back to One, that is the land that is  
14 being recommended at this time and not the lands that were  
15 recommended prior to the Commission --

16 A Yes, sir, that's correct.

17 Q Now I notice on Exhibit Number One there  
18 seems to be a hole in the Section -- is that --

19 A 18?

20 Q -- Section 18 or --

21 A Yes, sir, that's 18. They're large sec-  
22 tions.

23 Q All righty, could you explain what that  
24 is?

25 A That was open State land that the Commis

1 sioner of Public Lands asked us to delete.

2 MR. DICKERSON: Mr. Examiner, I  
3 might clarify that just a little because I learned something  
4 in this case, too.

5 The previous practice in my ex-  
6 perience before the Commissioner of Public Lands as to State  
7 leases has been that it was not objectionable from that of-  
8 fice's standpoint to include unleased State lands within the  
9 proposed unit boundary, since, after all, the geology that  
10 establishes the preferred unit boundaries includes such  
11 lands. It makes more sense to some of us have them included  
12 even though they were not committed and even though our sta-  
13 tutes and regulations on State leases have no provision in  
14 them to require that lease, if it later is obtained by some  
15 party, to be committed to that unit, unlike Federal leases,  
16 which are customarily issued with a stipulation that re-  
17 quires the lessee to commit that lease to an exploratory  
18 unit in a case such as this.

19 I'm now told that that practice  
20 is no longer followed by the Commissioner of Public Lands  
21 and that their preference is any unleased State tracts be  
22 simply omitted for any purpose within the proposed unit  
23 boundaries.

24 There is, as we stated, a pro-  
25 vision in the unit agreement for subsequent joinder of any  
party who obtains that State oil and gas lease to thereafter

1 commit it to the unit, but this procedure is one now recom-  
2 mended and required by the office of the Commissioner.

3 MR. STOGNER: As before this  
4 new administration, then, this little parcel would have been  
5 included.

6 MR. DICKERSON: It would have  
7 been included as within the unit boundaries, simply uncom-  
8 mitted, so --

9 MR. STOGNER: And treated like  
10 what the Federal government would treat their --

11 MR. DICKERSON: Right.

12 MR. STOGNER: -- mineral un-  
13 leased interest.

14 MR. DICKERSON: Well, the only  
15 difference between the Federal unleases situation and the  
16 State is that the Federal regulations do contain -- and the  
17 practice of the Bureau of Land Management upon issuance of a  
18 lease within a previously approved unit boundary is to in-  
19 sert in that lease a stipulation that permits the BLM at any  
20 time to require that that lease then be committed to the  
21 unit.

22 MR. STOGNER: Thank you, Mr.  
23 Dickerson. I'll keep that in mind from -- from here on out.

24 I have no further questions of  
25 Mr. Beardemphil.

1 MR. DICKERSON: I have nothing  
2 further.

3 MR. STOGNER: He may be ex-  
4 cused.

5  
6 MARK MAURITSEN,  
7 being called as a witness and being duly sworn upon his  
8 oath, testified as follows, to-wit:

9  
10 DIRECT EXAMINATION

11 BY MR. DICKERSON:

12 Q Mr. Mauritsen, you are the same witness  
13 who testified in the previous Case 9135 and had your creden-  
14 tials accepted, were you not?

15 A Yes, I was.

16 Q Can you summarize briefly, Mr. Mauritsen  
17 the geological basis for the formation of the proposed Eden  
18 Valley Unit?

19 A Yes. The propose Eden Valley Unit com-  
20 prises the following lands: Sections 31 and 32 of Township  
21 6 South, Range 24 East; Sections 4, 5, 6, 7, 16, 17, 18,  
22 less Lots 1 and 6, 19, 20, 21, and the north half Section  
23 26; Sections 29, 30, 32, 33, 34, and the west half Section  
24 35, Townships 7 South, 24 East, and the East half Section 2,  
25 Section 3, and the northeast quarter of Section 4 of Town-

1 ship 8 South, Range 24 East.

2                   The proposed unit is located between the  
3 Pecos Slope Abo Pool and the West Pecos Slope Abo pool.  
4 Both fields produce gas from a sequence of alluvial channel  
5 sandstones in the Lower Permian Leonard Abo formation.

6                   The primary objective of the test well --  
7 test wells within the proposed Eden Valley Unit is to prove  
8 the Abo gas production between the two established fields.

9                   Q           Mr. Mauritsen, directing your attention  
10 to the maps we have submitted as Yates Exhibit Number Five,  
11 will you summarize for the Examiner the information depicted  
12 on that map?

13                   A           Exhibit Five, the lefthand map is an Iso-  
14 pach and facies map of the Coyote sandstone, a sandstone  
15 that occupies a stratigraphic interval approximately 350  
16 feet below the top of the Abo formation. The contour inter-  
17 val is 10 feet. The Eden Valley Unit outline is marked by a  
18 dashed line and the proposed locations of the test wells are  
19 shown. A stratigraphic cross section A-A' is shown by a  
20 solid line and its wells numbered.

21                   The Coyote sandstone was mapped individu-  
22 ally as it has been commonly identified in wells on the eas-  
23 tern edge of the West Pecos Slope Abo Pool, and in one well  
24 located within the proposed unit and in wells on the western  
25 edge of the main Pecos Slope Abo Pool -- Abo Field.

1           An Isopach map showing the distribution  
2 of the Coyote sandstone and using hte currently accepted  
3 model of depositional environment, that is, fluvial channels  
4 in a lower alluvial regime, led to the interpretation of the  
5 facies.

6           The following facies have been defined  
7 and are so noted on the map: Tributary channel facies,  
8 slightly meandering channel facies, highly meandering chan-  
9 nel facies, and distributary channel facies.

10           The highly meandering channel facies with  
11 an Isopach thickness of 10 feet or greater of the Coyote  
12 sandstone is the justification for the unit outline.

13           Q           You have a separate map depicted at the  
14 upper righthand corner of that exhibit, Mr. Mauritsen. What  
15 have you shown on that instrument?

16           A           Exhibit Five, the upper righthand corner  
17 is a structural map contoured on top of the Abo formation.  
18 The contour interval is 50 feet. The Eden Valley outline is  
19 marked by a dashed line and the proposed location of the  
20 test wells are shown.

21           Wells providing datum points are circled  
22 with the appropriate subsea datum listed.

23           Structure is not critial to the proposed  
24 unit. The map shows regional monoclinal dip, east to  
25 southeast dip. The dip rate is roughly 100 feet per mile.

1           Q           Directing your attention to the cross  
2 section admitted -- or submitted as Exhibit Number Six, tell  
3 us what you've shown on that cross section.

4           A           Exhibit Six is a stratigraphic cross sec-  
5 tion A-A'. It is located northwest to southeast across the  
6 proposed unit.

7                       A shale marker immediately above the Abo  
8 has been chosen as a stratigraphic datum as the anhydrite  
9 interval which terminates the Yeso formation into the Abo  
10 formation thickens in a south/southeast direction.

11                      Channel sandstones within the Abo forma-  
12 tion have been identified and the individual sandstone, the  
13 Coyote sandstone, forming the basis for this unit has been  
14 so labeled.

15                      Producing sandstone intervals have been  
16 denoted with red perforations. The initial completion and  
17 cumulative production for each well is listed below the ap-  
18 propriate well log.

19                      Well No. 1 produces from the Coyote sand-  
20 stone in the updip tributary channel facies. Production  
21 from this well has been lower than expected from a sandstone  
22 of this thickness and porosity.

23                      This can be explained by a low resistiv-  
24 ity and a high water saturation in the sand. As the main  
25 source of hydrocarbon generation is probably in the basin

1 to the southeast, it is surmised that insufficient hydrocar-  
2 bons were generated to move the connate water in this updip  
3 distant facies.

4 Well No. 2 is immediately outside the  
5 proposed unit. The Coyote sandstone stratigraphic interval  
6 is a shale in this well. It is located between a channel  
7 and a cut-off channel in the alluvial plain facies.

8 Well No. 3 is also located just outside  
9 the proposed unit. This well has the Coyote sandstone pre-  
10 sent and several other good quality sands. Expected flow  
11 rates were never obtained from the well as there were many  
12 problems with the completion due to a very poor primary ce-  
13 ment job.

14 Well No. 4, is located in the downdip  
15 distributary channel facies and is completed in the Coyote  
16 sandstone. This well has been a strong producer from this  
17 zone with cumulative production expected to reach 1 BCF.

18 Q Mr. Mauritsen, in your opinion and based  
19 on your examination of this data, are the proposed unit  
20 boundaries justified by the geological evidence?

21 A Yes, they are. In summary, the proposed  
22 Eden Valley Unit outline is justified by extant data. The  
23 Coyote sandstone interval should be more easily located due  
24 to its widespread distribution in the highly meandering  
25 channel facies and when found it should be saturated with hyd-

1 rocarbons due to its closer proximity to the basin. Town-  
2 ship 7 South, Range 24 East, Sections 8, 9, 27 and 28, which  
3 are held by production, and Lots 1 and 6 of Section 18,  
4 Township 7 South, Range 24 East, have been withheld from the  
5 unit at the request of the Commissioner of Public Lands, but  
6 will be developed as if it is part of the unit due to the  
7 geological justification.

8 Q Again, Mr. Mauritsen, you did not person-  
9 ally prepare and examine the geology upon which these Exhi-  
10 bits Five and Six were submitted, but have you reviewed the  
11 underlying geology and in your opinion do these exhibits  
12 fairly and accurately depict the available information?

13 A Yes, they do.

14 MR. DICKERSON: Mr. Examiner,  
15 move admission of Yates Exhibits Five and Six.

16 MR. STOGNER: Exhibits Five and  
17 Six will be admitted in evidence.

18 Q Mr. Mauritsen will approval of this ap-  
19 plication be in the best interest of conservation, the pre-  
20 vention of waste, and the protection of correlative rights?

21 A Yes, it would.

22 MR. DICKERSON: I have nothing  
23 further for Mr. Mauritsen, Mr. Examiner.

24 MR. STOGNER: Thank you, Mr.  
25 Dickerson.

1

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## CROSS EXAMINATION

3

BY MR. STOGNER:

4

Q Mr. Mauritsen, referring back to Exhibit

5

Number Five, was any geophysical data used in determining

6

your --

7

A No.

8

Q -- Isopach?

9

A No, there wasn't.

10

Q Okay. Now when I look at the map on the

11

lower lefthand side in Sections 9 and 27, 7 South, 24 East,

12

I show existing wells and I assume those wells are presently

13

producing from the Abo?

14

A Yeah, unless they're shut-in. They have

15

produced from the Abo.

16

Q Okay, or at least tested in the Abo.

17

A Right.

18

Q Okay. Now, in both of them, the section

19

immediately to the west were not included in the unit. Were

20

-- there again, were these unleased mineral interest owners

21

or were there some other problems?

22

A I believe -- I think those are held by

23

production.

24

MR. DICKERSON: That -- Exhibit

25

Number Four, Mr. Examiner, I think is the letter from the

1 Commissioner of Public Lands, which described -- those are  
2 the tracts which are held by production from the wells  
3 you're pointing out. The position of the Commissioner of  
4 Public Lands is that since some development has already  
5 taken place on those leases, that it would be proper to com-  
6 mit those leases to the unit, and those were deleted.

7 The original application and  
8 the original exhibits did propose that those tracts be in-  
9 cluded within the unit boundaries. They were omitted at the  
10 direction of the Commissioner of Public Lands because the  
11 leases are held by production.

12 MR. STOGNER: Thank you, Mr.  
13 Dickerson.

14 Well, with this I have no fur-  
15 ther questions of this witness. He may be excused.

16 Mr. Dickerson, do you have any-  
17 thing further in this case?

18 MR. DICKERSON: No, Mr. Exa-  
19 miner. Again in this case the exhibits or the instruments,  
20 the unit agreement and unit operating agreement when finally  
21 formed and revised as necessary, will be submitted to your  
22 office and those of the other agencies.

23 MR. STOGNER: Before I take  
24 this case under advisement, the description of the lands on  
25 Exhibit Two, pages -- page number 2, that is the unit in

1 which -- as it now exists. Would there be any amendments to  
2 that location or those --

3 MR. DICKERSON: No. No, that's  
4 correct as submitted.

5 MR. STOGNER: Okay.

6 In that case, this case will be  
7 taken under advisement.

8

9 (Hearing concluded.)

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C E R T I F I C A T E

I, SALLY W. BOYD, C.S.R., DO  
HEREBY CERTIFY the foregoing Transcript of Hearing before  
the Oil Conservation Division (Commission) was reported by  
me; that the said transcript is a full, true, and correct  
record of the hearing, prepared by me to the best of my  
ability.

Sally W. Boyd CSR

FILED \_\_\_\_\_  
OCT 20 1987  
Mickel [Signature] Examiner  
Oil Conservation Division